IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Application of: Robert M. Dunn	:
	: Before the Examiner:
Serial No: 09/918,576	: Stefanos Karmis
Filed: 07/31/2001	: Group Art Unit: 3691
Title: CALCULATION SCALE FRAMEWORK	: Confirmation No.: 1855

APPELLANTS' BRIEF UNDER 37 C.F.R. §41.37

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This is an appeal to a final rejection dated March 21, 2007 of the claims in the Application. This brief is submitted pursuant to a Notice of Appeal filed on June 13, 2007 in accordance with 37 C.F.R. §41.31.

BRIEF FOR APPLICANTS - APPELLANTS

(i)

Real Party in Interest

The real party in interest is International Business Machines Corporation (IBM), the assignee.

(ii)

Related Appeals and Interferences

There are no other appeals or interferences known to appellants, appellants' representative or assignee, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(iii)

Status of Claims

Claims 1 – 24 are finally rejected. Claims 1 – 23 are being appealed.

(iv)

Status of Amendment

An "Amendment After Final" was not filed.

(v)

Summary of Claimed Subject Matter

The invention, as claimed in Claim 1, provides a method of displaying a result to a user. The result is provided by a calculation scale framework for use in an electronic commerce environment comprising a computer network Page 2, line 22 to page 3, line 3). The electronic commerce environment defines a calculation rule and a set of commerce objects (page 2, lines 8 – 17, page 14, lines 15 – 23 and page 19, lines 3 – 6 and lines 19 – 22). The method comprises providing a calculation scale comprising calculation ranges, each said calculation range being either cumulative or non-cumulative and having an associated range

start number (page 2, lines 8 – 17, page 15, lines 10 – 17, page 19, lines 19 – 24 and page 20, lines 6 - 8), an optional currency attribute, which when present specifies the currency of the range start numbers (page 18, line 19 to page 19, line 2 and page 19, lines 15 and 16), and an optional unit of measure attribute, which when present specifies the unit of measure for the range start numbers (page 19, lines 7 – 13); providing a calculation scale look up interface (page 4, lines 4 – 6, 12 and 13), a base monetary value, a result multiplier and a set of mathematical weights corresponding to the set of commerce objects (page 15, lines 16 – 20, page 16, lines 1, 2, 15 and 16, and page 17, line 13); providing a range look up result interface to return a calculation result (page 16, lines 20 – 25); providing a multiplication product of the calculation result and the result multiplier (page 17, lines 12 – 15); providing a total result, the total result being provided by adding the multiplication product to a previously determined sum of multiplication products when the calculation range is cumulative and by replacing the previously determined multiplication product when the calculation range is non-cumulative (page 19, line 19 – page 20, line 24, page 21, line 17 – page 22, line 10); apportioning the total result to the set of commerce objects in proportion to the set of mathematical weights (page 18, lines 7 – 15); and displaying the apportioned result (page 18, lines 7 – 15).

The invention, as claimed in Claim 10, provides a computer program product for use with a computer system in an electronic commerce environment that comprises a computer network. The electronic commerce environment defines a calculation rule and a set of commerce objects. The computer program product comprises: a recording medium (page 12, lines 16 – 19), means, recorded on the recording medium, for providing a calculation scale look up interface to return a result multiplier and a set of mathematical weights corresponding to the set of commerce objects (page 2, lines 8 – 17, page 15, lines 10 – 17, page 19, lines 19 – 24 and page 20, lines 6 – 8 and (page 15, lines 16 – 20, page 16, lines 1, 2, 15 and 16, and page 17, line 13); means, recorded on the recording medium, for providing a range look up result interface (page 16,

lines 20 – 25); means, recorded on the recording medium, for providing a multiplication product of the calculation result and the result multiplier (page 17, lines 12 – 15); means, recorded on the recording medium, for providing a total result by adding the multiplication product to a previously determined sum of multiplication products, in a cumulative environment defined by the calculation rule, and, replacing the previously determined multiplication product in a non cumulative environment defined by the calculation rule (page 19, line 19 – page 20, line 24, page 21, line 17 – page 22, line 10); means, recorded on the recording medium, for apportioning the total result to the set of commerce objects in proportion to the set of mathematical weights (page 18, lines 7 – 15); means, recorded on the recording medium, for displaying the apportioned result to a user (page 18, lines 7 – 15). The means of the claimed invention are the steps enumerated on page 14, line 24 to page 23, line 23 and in Figs. 1 – 5).

(vi)

Grounds of Rejection to be Reviewed on Appeal

Whether it was proper to reject Claims 1 – 23 under 35 USC §103(a) as being unpatentable over Danford-Klein et al. in view of Blinn et al.

(vii)

Arguments

Whether it was proper to reject Claims 1 – 23 under 35 USC §103(a) as being unpatentable over Danford-Klein et al. in view of Blinn et al.

It is a well settled law that in considering a Section §103 rejection, the subject matter of the claim "as a whole" must be considered and analyzed. In the analysis, it is necessary that the scope and contents of the prior art and differences between the art and the claimed invention be determined. *Graham v. John Deere Co.*, 383 U.S. 1 (1966).

Danford-Klein et al. purport to teach a method for processing rating requests in a computerized rating system. According to the teachings of CA920000062US1

Danford-Klein et al., a rating engine operable to receive rating requests associated with a carrier contract is provided. The rating engine includes a base rating engine object to calculate a linehaul rate in response to the rating request. Rating data for a particular carrier contract may be grouped together such that the rating data contained in a particular rating engine object is valid only for a date range that applies to all data contained in the object. The grouping of rating data by effective date avoids the redundancy of storing date information at the line level, thus lowering storage requirements and increasing calculation speed.

However, Danford-Klein et al. do not teach the steps of providing a calculation scale comprising calculation ranges, ***each said calculation range being either cumulative or non-cumulative*** and having an associated range start number, ***an optional currency attribute, which if present specifies the currency of the range start numbers,*** and an optional unit of measure attribute, which if present specifies the unit of measure for the range start numbers; ***providing a calculation scale look up interface, a base monetary value, a result multiplier and a set of mathematical weights corresponding to the set of commerce objects; providing a total result, the total result being provided by adding the multiplication product to a previously determined sum of multiplication products when the calculation range is cumulative and by replacing the previously determined multiplication product when the calculation range is non-cumulative***; and ***apportioning the total result to the set of commerce objects in proportion to the set of mathematical weights***.

The Examiner asserted that in col. 12, line 64 to col. 13, line 13 Danford-Klein et al. teach the step of providing a calculation scale comprising calculation ranges, each said calculation range being either cumulative or non-cumulative and having an associated range start number, an optional currency attribute, which when present specifies the currency of the range start numbers, and an optional unit of measure attribute, which when present specifies the unit of measure for the range start numbers. Applicants disagree.

In col. 12, line 64 to col. 13, line 13, Danford-Klein et al. disclose the following:

> Rating engines are designed to process different rate structures which include geography matrices, mileage bands, weight bands and complex combinations of these matrices and bands. These base rating engines contain the actual price data used to calculate the price for linehaul service. The price data is made up of an index type, origin/destination type or band type, a unit of measure, and effective dates. In addition to these specific base rating engines, there are rating engines which are collections of rating engines. Such rating engines are known as collective rating engines and include the selective, additive, multiplier, minimum, and maximum engines. Collective rating engines do not contain actual price data but instead contain other rating engines which could be base rating engines, as well as other collective rating engines. Collective rating engines also include the methods for uniquely processing the associated collection of rating engines.

But note that in the cited passage, Danford-Klein et al. do not even suggest ***an optional currency attribute, which when present specifies the currency of the range start numbers*** as stated in the claimed invention. Put differently, the teachings of Danford-Klein et al. do not provide for calculations in different currency denominations. By contrast the present invention provides for such calculations through the currency attribute.

In the Final Office Action, the Examiner stated that "Danford-Klein et al. teach a rating engine with actual price data used to calculate the price for linehaul services. Price is clearly a currency attribute which when present specifies the currency. Therefore this argument is not persuasive." (See first paragraph on page 5 of the Final Office Action.)

However, it should be pointed out that the limitations of the claimed invention are "***an optional currency attribute, which when present specifies***

the currency of the range start numbers." This infers that the currency attribute is not always present, which is why the qualifying phrase "***which when present specifies the currency of the range start numbers***" is used.

By contrast, if one were to agree with the Examiner's argument that "price is clearly a currency argument ...," in the disclosure of Danford-Klein et al., then price would not be optional since the disclosure of Danford-Klein et al. is directed toward calculating rating requests (i.e. price will always be present). Further, since price is not optional, then there is no reason for the use of the phrase "***which when present specifies the currency of the range start numbers***" by Danford-Klein et al..

Thus, Appellants, once more, submit that Danford–Klein do not teach the step of providing a calculation scale comprising calculation ranges, ***each said calculation range being either cumulative or non-cumulative*** and having an associated range start number, ***an optional currency attribute, which if present specifies the currency of the range start numbers,*** and an optional unit of measure attribute, which if present specifies the unit of measure for the range start numbers.

The Examiner further asserted that in col. 15, lines 43 – 63, Danford-Klein et al. teach the step of providing a calculation scale look up interface, a base monetary value, a result multiplier and a set of mathematical weights corresponding to the set of commerce objects. Again, Applicants disagree.

In col. 15, lines 43 – 63, Danford-Klein et al. disclose that:

> Another feature of the present invention that allows fast and efficient calculation of linehaul service rates is the grouping of rating data by the dates on which that data is effective. According to this feature of the invention, a rating engine specifies a start date and an end date for which the rating data associated with that object is valid. If the ship date does not fall within the date range, then that rating engine will return a rate not found message in response to a request to calculate a rate. In this embodiment, the

> secondary prioritization of the list of rating engines in a collective rating engine is performed in inverse order by start date. Accordingly, rating engines with equal priority codes having start dates that are later in time have a higher priority than rating engines with start dates that are earlier in time. Grouping of rate data according to effective dates allows the data to be located quickly, and also avoids replication of data. Because there may be a large number of items of rating data that have identical start and end dates, creating a rating engine containing rates with the same start date and end date avoids the need to store a start date and end date with each item of rating data.

Clearly, the above passage is related to dates and valid date ranges. Contrary to the Examiner's assertion, therefore, the passage does not teach, show or so much as suggest the step of ***providing a calculation scale look up interface, a base monetary value, a result multiplier and a set of mathematical weights corresponding to the set of commerce objects*** as in the claimed invention.

In response to Appellants' arguments, the Examiner asserted that "[t]he section teaches calculation of linehaul service rates within certain date ranges (column 15, lines 43 – 63). The rating engine mentioned performs cost calculations for linehaul services (column 7, lines 33 – 45, column 9, line 59 thru column 10, line 13 and column 16, lines 23 – 40). The rating engine also provides calculations using a base monetary value (column 16, lines 23 – 40). Therefore Applicant's argument is not persuasive because Danford-Klein clearly teaches that the rates calculated by the rating engine are limited to dates." (See the second paragraph on page 5 of the Final Office Action.)

Appellants notice that the Examiner did not point to any place in the disclosure of Danford-Klein et al. where the limitations ***the result multiplier and the set of mathematical weights corresponding to the set of commerce objects*** are disclosed.

Appellants again submit that Danford-Klein et al. do not teach, show or suggest the step of ***providing a calculation scale look up interface, a base monetary value, a result multiplier and a set of mathematical weights corresponding to the set of commerce objects*** as claimed.

The Examiner admitted that Danford-Klein et al. do not teach the step of providing the total result but asserted that Blinn et al. do provide such step in col. 29, lines 50 – 59. Applicants continue to disagree.

Blinn et al. purport to teach a method for processing electronic order forms. Specifically, Blinn et al. disclose an electronic merchandising system that allows merchants to create electronic orders which are easily adaptable for different sales situations. For example, the electronic order has flexible blackboards which allow merchants to add sales information with what are called key-value pairs. The key-value pairs may include special shipping information, unique billing information, gift wrap information, monogram information, etc. Each order form contains as many key-value pairs as are necessary to define a sales transaction. In other words, merchants can customize the electronic merchandising system for diverse sales transactions by adding new key-value pairs or deleting existing key-value pairs.

However, Blinn et al. do not teach the step of ***providing a total result, the total result being provided by adding the multiplication product to a previously determined sum of multiplication products when the calculation range is cumulative and by replacing the previously determined multiplication product when the calculation range is non-cumulative*** as claimed.

The Examiner asserted that Blinn et al. teach this step in col. 29, lines 50 – 59. Applicants disagree. In col. 29, lines 50 – 59, Blinn et al. disclose the following:

> The components in the order total stage 384 compute the total charge for the order 124. The preferred order total default component 1262 sets the order.sub.-- total key-value pair to the

> sum of the oadjust.sub.-- subtotal key-value pair, the shipping.sub.-- total key-value pair, the tax.sub.-- total key-value pair, and the handling.sub.-- total key-value pair.

It is clear that in this passage, Blinn et al. do not teach the step of ***replacing the previously determined multiplication product when the calculation range is non-cumulative*** as in the claimed invention.

In response to this argument, the Examiner stated in the Final Office Action that *Danford-Klein in view of Blinn teach replacing the previously determined multiplication product when the calculation range is non-cumulative*. Danford-Klein teaches replacing previous calculations with new calculations in a non-cumulative range (column 16, line 23 thru column 17, line 50). Blinn also discloses replacing a multiplication product when a calculation is non-cumulative (column 26, lines 3 – 59).

Appellants submit that Danford-Klein et al. do not teach the step of ***providing a total result, the total result being provided by adding the multiplication product to a previously determined sum of multiplication products when the calculation range is cumulative and by replacing the previously determined multiplication product when the calculation range is non-cumulative***, Danford-Klein et al. disclose:

> An instance of multiplier rating engine object class 106 will loop through its vector of rating engines and will multiply all of the results together. Less than truckload rating engines may use this type of engine to multiply the cost of the less than truckload rate by the carrier's discount. The carrier's discount will normally be calculated using a base rating engine such as an instance of standard YF 500 discount rating engine object class 112. The value of the discount is normally expressed as a percentage of the actual rate. Accordingly, the "rate" produced by an instance of standard YF 500 discount rating engine will not comprise an actual price,

but will instead comprise a percentage value reflecting the proper discount. Accordingly, rating engines do not always calculate price parameters, but instead may calculate other parameters associated with a rating request. The term "rate" is meant to broadly encompass these parameters.

An instance of maximum rating engine object class 110 and an instance of minimum rating engine object class 108 loop through their vector of rating engines and will return the highest cost rate and the lowest cost rate, respectively, determined by each engine in their vector of rating engines.

Note that rating engine object class 96 is an abstract class. It is used to define a common interface to all base and collective rating engines.

An example of a rating engine associated with an instance of carrier contract object class 70 will be discussed in connection with FIG. 8 below. For present purposes, it is sufficient to note that the rating engine associated with a particular instance of a carrier contract object class may comprise a base rating engine, and/or a collective rating engine in combination with one or more additional base rating engines. Each of these rating engines is operable to calculate a linehaul rate in response to a rating request issued to the instance of carrier contract object class 70. Again, the term "linehaul rate" is used broadly with rate having the broad meaning discussed above. Although the final result calculated by the rating engine will normally be the price for linehaul service, a linehaul rate calculated by a particular base rating engine or

collective rating engine may only be some other type of parameter used to determine the final linehaul price.

Each base rating engine object and collective rating engine object has a method operable to calculate a linehaul rate and a rate data structure comprising at least one rate value and accessible by the rating method for use in calculating a linehaul rate. In this embodiment, each of the individual rating engine objects are contained in an instance of carrier contract object class 70. The modular rating engine structure may be implemented in a different way without departing from the scope and teachings of the invention. For example, rating engines could be used by, rather than contained in, a carrier contract object. In addition, rating engines could be implemented as methods of the carrier contract object class. Also, a rating engine could be implemented as an ordinary software module containing a collection of procedures and variables. The functions of the collective rating engines could be implemented as methods of a carrier contract object that have access to base rating engine objects contained in or used by the carrier contract object. It should also be noted that a carrier contract object is broadly defined to comprise a collection of data representing contract terms of a contract between a carrier and a customer. Carrier contracts could be implemented in a different format such that each carrier contract is not represented by its own carrier contract object.

Although the invention includes the base and collective rating engines described above, other base rating engines and/or collective rating engines could be used in a computerized rating system without departing from the scope of the invention. One or

> more of the collective rating engines and/or base rating engines could also be omitted from a computerized rating system without departing from the scope of the invention.
>
> In addition to the charges for basic linehaul service, contracts between a carrier and a customer may include charges for a large number of additional services that may be applicable to that particular contract. These charges could be flat charges, charges billed by the mile, charges by the hour, charges by the day, or charges by some other unit. Service charges include, but are not limited to, charges for tarps, night delivery, or rigging, to name just a few. Also, for certain types of shipments, equipment may be rented on a per-mile basis by the customer. Such a service would be described by the equipment type. Table 1 lists a series of services that can be handled by an embodiment of a computerized rating system constructed in accordance with the invention. Table 1 also indicates the unit of measure associated with a particular type of service. "FLT" refers to a flat rate unit of measure. "DAY" refers to a charge by the day. "HRS" refers to charges by the hour. "MI" refers to charges by the mile. "LBS" refers to charges by the pound. "UNT" refers to charges by the unit. "WD" refers to charges by per one hundred pounds of weight.

But note that Danford-Klein et al. do not teach anywhere in the reproduced passage the step of ***providing a total result, the total result being provided by adding the multiplication product to a previously determined sum of multiplication products when the calculation range is cumulative and by replacing the previously determined multiplication product when the calculation range is non-cumulative*** as claimed.

Further Applicants submit that Blinn et al. do not teach the step of ***providing a total result, the total result being provided by adding the multiplication product to a previously determined sum of multiplication products when the calculation range is cumulative and by replacing the previously determined multiplication product when the calculation range is non-cumulative***. In column 26, lines 3 – 59, Blinn et al. disclose:

> The FixedShipping component 1246a then evaluates the shipping.sub.-- method key-value pair to determine whether Federal Express delivery has been selected. If so, the FixedShipping component 1246a adds a $10.00 fee to the shipping.sub.-- total key-value pair.
>
> The LinearShipping component 1246b relies on a rate computed with a basis value that the merchant specifies in the registry. The basis is multiplied by the rate to determine the shipping cost. The basis value is typically some attribute of the item, such as quantity or weight. The format of the registry command is "WLStdOrder.LinearShipping method basis rate" where the "method" argument identifies a particular shipping method, the "basis" argument is the name of the key-value pair to use as the basis (such as the quantity, currentprice, adjustedprice, or weight), and the "rate" argument is the number to multiply by the basis to obtain the price.
>
> For example, assume the merchant desires to charge 20 cents for shipping each item via the United State Postal Service. In this example, the merchant enters into the registry "WLStdOrder.LinearShipping USMail quantity 20." Furthermore, assume that a consumer buys 2 units of one item and 4 units of another and specifies delivery via the United States Postal Service.

In this example, the LinearShipping component 1246b will evaluate the quantity key-value pairs for each item and determine that the consumer has purchased six items. The LinearShipping component 1246b then multiplies the total number of items (six) by 0.20 cents to calculate $1.20 shipping amount. The LinearShipping component 1246b then stores the shipping amount in the shipping.sub.-- total key-value pair in the order blackboard 350.

The TableShipping component 1246c uses a lookup table to determine what the shipping cost should be. The merchant specifies a basis (the unit of measurement for the product), a rate per basis unit, a database query name, and optionally a key-value pair used to calculate the shipping cost. The specified database query searches the database for the proper value. The format of the TableShipping command in the registry is "WLStdOrder.TableShipping method basis queryname location" where the "method" argument identifies a shipping method, the "basis" argument identifies the key-value pair used to compute the shipping cost, the "queryname" argument identifies a database query, the "location" argument identifies the key-value pair used for the shipping calculation. If the location key-value pair is not specified, it defaults to the ship.sub.-- to.sub.-- zip key-value pair.

The method name, the basis, and the value of the location field are used to create the database query. The database query then uses well-known database techniques to obtain the corresponding shipping cost. The shipping cost is then stored in the shipping.sub.-- total key-value pair.

> The shipping required component 1248 verifies whether the shipping.sub.-- total is set. If not, the shipping required component 1248 generates an error message. The error message is a string which is stored in the order 124.

But as in the case of Danford-Klein et al., Blinn et al. do not teach anywhere in the reproduced passage the step of ***providing a total result, the total result being provided by adding the multiplication product to a previously determined sum of multiplication products when the calculation range is cumulative and by replacing the previously determined multiplication product when the calculation range is non-cumulative*** as claimed.

However, even if both Danford-Klein et al. and Blinn et al. did teach the limitations that the Examiner asserted that they teach, there would not be any reason to combine their teachings absent some specific teachings or suggestion to do so (see ***In re Fritch***, 972 F.2d 1260, 23 USPQ 2d 1780, 1783–84 (Fed. Cir. 1992) where the Court ruled that "[o]bviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. Under section 103, teachings of references can be combined *only* if there is some suggestion or incentive to do so." (quoting *ACS Hosp. Systems, Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984)). . . . The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification.

In this particular case, the Examiner stated that both Danford-Klein et al. and Blinn et al. teach the limitations of replacing previous calculations with new calculations in a non-cumulative range (see first paragraph on page 6 of the Final Office Action). If both references teach the same limitations, then there is no

reason to combine the teachings of the two references to arrive at the claimed invention.

Notwithstanding the fact that there is no reason to combine the teachings of the two references, Appellants submit that neither Danford-Klein et al. nor Blinn et al. teach or suggest combining their teachings to each other, Therefore the Examiner has impermissibly done so.

Since neither Danford-Klein et al. nor Blinn et al. teach the claimed elements of the invention and that their teachings have impermissibly been combined together, Appellants request reversal of the rejection and passage to issue of Claims 1 – 23.

Respectfully Submitted

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(viii)

Claims Appendix

1. (Previously presented) A method of displaying a result to a user, the result being provided by a calculation scale framework for use in an electronic commerce environment comprising a computer network, the electronic commerce environment defining a calculation rule, and a set of commerce objects, the method comprising:

providing a calculation scale comprising calculation ranges, each said calculation range being either cumulative or non-cumulative and having an associated range start number, an optional currency attribute, which when present specifies the currency of the range start numbers, and an optional unit of measure attribute, which when present specifies the unit of measure for the range start numbers;

providing a calculation scale look up interface, a base monetary value, a result multiplier and a set of mathematical weights corresponding to the set of commerce objects;

providing a range look up result interface to return a calculation result;

providing a multiplication product of the calculation result and the result multiplier;

providing a total result, the total result being provided by adding the multiplication product to a previously determined sum of multiplication products when the calculation range is cumulative and by replacing the previously determined multiplication product when the calculation range is non-cumulative;

apportioning the total result to the set of commerce objects in proportion to the set of mathematical weights; and

displaying the apportioned result.

2. (Original) The method as claimed in claim 1, the method comprising:

passing the set of commerce objects, the calculation rule, and the calculation scale to the calculation scale look up interface.

3. (Original) The method as claimed in claim 2, comprising passing a currency, a calculation range look up result, an applicable part of a look up number, and an applicable part of a base monetary value.

4. (Original) The method of claim 3, wherein the applicable part of the look up number is returned by the calculation scale look up interface.

5. (Original) The method of claim 4, wherein the applicable part of the base monetary value is returned by the calculation scale look up interface.

6. (Original) The method of claim 5, wherein the calculation scale look up interface returns parameters comprising:

a look up number for comparison to a predetermined set of range start values;

the base monetary value;

the result multiplier;

the set of mathematical weights; and

an exception if a required conversion defined by the electronic commerce environment is not available.

7. (Original) The method of claim 6, wherein the range look up result interface returns an exception if a calculation result is not available in a currency specified by the electronic commerce environment.

8. (Original) The method of claim 7, wherein the total results are apportioned by one or more of a group of parameters having quantity, quantity spread by net price, weight, weight spread by net price, non discounted price, net price, unit price, taxable net price, and taxable unit price.

9. (Original) The method of claim 8, wherein the range look up result interface returns the calculation result calculated from one or more in a set of parameters having a fixed amount, a per unit amount, and a percentage.

10. (Previously presented) A computer program product for use with a computer system in an electronic commerce environment comprising a computer network, the electronic commerce environment defining a calculation rule, and a set of commerce objects, the computer program product comprising:

a recording medium,

means, recorded on the recording medium, for providing a calculation scale look up interface to return a result multiplier and a set of mathematical weights corresponding to the set of commerce objects;

means, recorded on the recording medium, for providing a range look up result interface;

means, recorded on the recording medium, for providing a multiplication product of the calculation result and the result multiplier;

means, recorded on the recording medium, for providing a total result by adding the multiplication product to a previously determined sum of multiplication products, in a cumulative environment defined by the calculation rule, and, replacing the previously determined multiplication product in a non cumulative environment defined by the calculation rule;

means, recorded on the recording medium, for apportioning the total result to the set of commerce objects in proportion to the set of mathematical weights;

means, recorded on the recording medium, for displaying the apportioned result to a user.

11. (Original) The computer product of claim 10, wherein the recording medium is one of a group of magnetic recording media having a computer disk, a CDROM, and a hard drive.

12. (Original) The computer product of claim 11, wherein the recording medium comprises means for passing the set of commerce objects and a

predetermined set of calculation range objects to the calculation scale look up interface.

13. (Original) The computer product of claim 12, wherein the recording medium comprises means for passing a set comprising a calculation range look up result, an applicable part of a look up number, and an applicable part of a base monetary value.

14. (Original) The computer product of claim 13, wherein the recording medium comprises means for returning the applicable part of the look up number from the calculation scale look up interface.

15. (Original) The computer product of claim 14, wherein the recording medium comprises means for returning the applicable part of the base monetary value from the calculation scale interface.

16. (Original) The computer product of claim 15, wherein the recording medium comprises means for returning from the calculation scale look up interface parameters comprising:

a look up number for comparison to a predetermined set of range start values;

the base monetary value;

the result multiplier;

the set of mathematical weights; and

an exception if a required conversion defined by the electronic commerce environment is not available.

17. (Original) The computer product of claim 16, wherein the recording medium comprises means for returning an exception from the range look up result interface if a calculation result is not available in a currency specified by the electronic commerce environment.

18. (Original) The computer product of claim 17, wherein the recording medium comprises means for returning, from the calculation scale look up interface, total results apportioned by one or more of a group of parameters having quantity, quantity spread by net price, weight, weight spread by net price, non discounted price, net price, unit price, taxable net price, and taxable unit price.

19. (Original) The computer product of claim 18, wherein the recording medium comprises means for returning, from the range look up result interface, the calculation result calculated from one or more in a set of parameters having a fixed amount, a per unit amount, and a percentage.

20. (Original) The computer program product of claim 10 wherein said computer readable code means comprises a computer readable signal and said medium comprises a computer readable signal-bearing medium.

21. (Original) The computer program product of claim 20 wherein said medium is a recordable data storage medium.

22. (Original) The product of claim 20 wherein said medium is a modulated carrier signal.

23. (Original) The product of claim 22 wherein said signal is a transmission over a network.

(ix)

Evidence Appendix

None.

(x)

Related Proceedings Appendix

None.